

Notice of Allowability

Application No.

10/718,756

Examiner

Krishnan S. Menon

Applicant(s)

JOHNSON ET AL.

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment of 2/2/07.
2. ☒ The allowed claim(s) is/are 1-4,7 and 34-48; RENUMBERED 1-20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/045,186.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Lisa Winsor on 2/20/07.

The application has been amended as follows: List of amended claims follows, starting on a fresh page.

The following is an examiner's statement of reasons for allowance: The closest prior art is Kopf, which does not teach the axially and slidingly engageable clip which also has a radial contraction when engaged.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Amended Claims List

1. (Currently Amended) A membrane filtration system for connecting a filter submodule comprising one or more elongate bundles of semipermeable polymeric fibers, said system comprising:

a housing;

at least one submodule comprising an elongate bundle of semipermeable polymeric fibers attached to a connecting sleeve having a locking formation;

at least one submodule connecting collar connected with said housing, said collar constructed and arranged to receive and locate the connecting sleeve, said collar releasably secured to the sleeve at an end by a snap clip, which adapted to axially and slidingly engage engages both said collar and said locking formation and at least in part surround both said collar and said locking formation to prevent axial withdrawal of said submodule from said collar, wherein the clip is resiliently biased to enable radial contraction of the clip when the clip ~~slidingly~~ engages with the submodule and the collar.

2. (Previously presented) The manifold according to claim 1, wherein said housing is in fluid communication with said collar.

3. (Previously presented) The manifold according to claim 1, wherein said collar has an internal stepped seat for bearing engagement with said end of said submodule.

Art Unit: 1723

4. (Previously presented) The manifold according to claim 1, wherein said locking formation comprises a radially outwardly directed circumferential flange formed on said sleeve.

5-6. (Canceled).

7. (Previously presented) The manifold according to claim 1, wherein said side wall comprises a bottom radially inwardly directed circumferential flange at or adjacent the bottom of said side wall for bearing engagement with a complementary step on said collar.

8-33. (Canceled).

34. (Previously presented) The manifold according to claim 1, comprising four submodule connecting collars.

35. (Previously presented) The manifold according to claim 34, wherein said collars are disposed in a common plane and have parallel axes.

36. (Currently amended) A membrane filtration system comprising:

- a first housing;

- a plurality of submodules, wherein each submodule comprises:

Art Unit: 1723

an elongate bundle of fibers; and

a first connecting sleeve positioned about the bundle of fibers at one end of the bundle of fibers, wherein the sleeve comprises a locking formation;

a plurality of first collars attached to the first housing, wherein each of the plurality of first collars is constructed and arranged to receive and locate the first connecting sleeve of one of the plurality of submodules; and

a plurality of resiliently biased snap clips, wherein each clip comprises a sidewall having a split to define opposed wall edges, and wherein each clip is releasably connected to and axially and slidingly engages with one of the plurality of first collars and the locking formation of the first connecting sleeve of one of the plurality of submodules, wherein the clip is resiliently biased to enable radial contraction of the clip when the clip engages with the first collar and the first connecting sleeve.

37. (Previously presented) The membrane filtration system of claim 36, wherein the clips are releasably connected to one of the plurality of first collars and the first connecting sleeve of one of the plurality of submodules by a snap fit.

38. (Previously presented) The membrane filtration system of claim 37, wherein each of the plurality of submodules further comprises a second connecting sleeve positioned about the bundle of fibers at an end of the bundle of fibers opposite the first connecting sleeve.

Art Unit: 1723

39. (Previously presented) The membrane filtration system of claim 38, further comprising:

a second housing; and

a plurality of second collars attached to the second housing wherein each of the plurality of second collars is constructed and arranged to receive the second connecting sleeve of one of the plurality of submodules;

40. (Previously presented) The membrane filtration system of claim 36, further comprising a filtrate conduit fluidly connected to the first housing.

41. (Previously presented) The membrane filtration system of claim 37, further comprising a cleaning fluid conduit fluidly connected to the second housing.

42. (Previously presented) The membrane filtration system of claim 41, wherein the cleaning fluid conduit is positioned between two pairs of second collars.

43. (Previously presented) The membrane filtration system of claim 36, wherein the submodules are arranged in an upright position.

44. (Previously presented) The membrane filtration system of claim 36, wherein four first collars are attached to the first housing.

Art Unit: 1723

45. (Previously presented) The membrane filtration system of claim 36, further comprising an open feed tank.

46. (Previously presented) The membrane filtration system of claim 39, further comprising a fluid tight cap attached to the second housing.

47. (Currently amended) The membrane filtration system of claim 1, wherein the clip is cylindrical having a side wall having a top and bottom and a split to define opposed wall edges ~~[[. The]]~~, the clip further comprising a top radially inwardly directed circumferential flange adjacent the top of said wide wall for gearing engagement with said locking formation on said sleeve.


48. (Previously presented) The membrane filtration system of claim 47, wherein the clip further comprises projections on said side wall adjacent respective side opposed edges, wherein said projections extend longitudinally from said top flange.

Art Unit: 1723

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S. Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Krishnan S Menon
Primary Examiner
Art Unit 1723